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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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SCHAUMBURG, IL 60196

EXAMINER

CORSARO, NICK

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/736,799

Applicant(s)

BONTA, JEFFREY D.

Examiner

Nick Corsaro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-42 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-23, 27-31 and 43-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "METHOD AND APPARATUS FOR OPTIMAL SYSTEM CONTROL PARAMETER ASSIGNMENTS FOR HANDOVER, BASED ON MOBILE LOCATION".

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7-23, 27-31, and 43-52 rejected under 35 U.S.C. 103(a) as being unpatentable over Corbett et al. (6,351,642) in view of Chheda et al. (5,946,621).

Consider claims 1, 5, and 43, Corbett discloses a method of assigning an effective as possible system control parameter in a wireless communication system having one or more transceivers (see abstract lines 1-8, col. 1 lines 65-67, col. 2 lines 1-12, and col. 6 lines 8-15, where Corbett discusses, a biased neighbor cell list, i.e., an optimal system control parameter). Corbett discloses applying a reference frame having a plurality of regions to a coverage area of the communication system, wherein the reference frame is independent of the locations of the one or more transceivers and each one of the plurality of regions corresponds to a location estimate (see col. 4 lines 27-55, col. 4 lines 62-67, and col. 5 lines 12-12-53, where Corbett

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discusses location estimates determined by GPS, therefore, a latitude and longitude reference frame independent of base station transceivers). Corbett discloses assigning to each one of the plurality of regions a code corresponding to a system control parameter optimized for the corresponding location estimate (see col. 5 lines 4-67 and col. 6 lines 9-46, where based mobiles GPS location and direction, and velocity, and weighted neighbor list is generated). Corbett discloses providing to a mobile station the code assigned to a region of the plurality of regions in which the mobile station is located (see col. 6 lines 8-45).

Corbett discloses assigning an effective as possible system control parameter for use by the mobile station (col. 2 lines 50-65, col. 1 lines 65-67, col. 2 lines 1-12, and col. 6 lines 8-46, where, Corbett discusses sending an effective as possible neighbor set to the mobile), however Corbett does not specifically disclose optimal system control parameter. Chheda teaches an optimal system control parameter (see col. 4 lines 58-67, col. 6 lines 15-30, and col. 6 lines 15-67, where Chheda discusses optimizing the neighbor set).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Corbett, and have an optimal system control parameter, as taught by Chheda, thus allowing more efficient handoffs by not placing useless information in the control parameter, as discussed by Chheda (col. 4 lines 38-55).

Consider claim 9, Corbett discloses a communications system having a plurality of base stations defining a coverage area (see abstract lines 1-10, where Corbett discloses a CDMA cellular system). Corbett discloses a plurality of defined geographic regions positioned irrespective of the base stations and subdividing the coverage area (see col. 4 lines 27-55, and col. 5 lines 25-54, where Corbett location estimates determined by GPS, therefore, a latitude and

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longitude reference frame independent of base station transceivers). Corbett discloses a system control parameter is in association with each region, each system control parameter being optimized for a mobile station located within that region (see col. 1 lines 65-67, col. 2 lines 1-12, and col. 6 lines 8-40, where Corbett discloses a biased neighbor list, the neighbor list being a control parameter, the bias optimizing the list). Corbett discloses means for determining a geographic region of the plurality of defined geographic regions in which a mobile station is located (see col. 4 lines 27-55, and col. 5 lines 12-55). Corbett discloses means for assigning the mobile station the most effective system control parameter for the region in which the mobile station is located (see col. 6 lines 8-46, col. 1 lines 65-67, and col. 2 lines 1-12).

Corbett discloses assigning an effective as possible system control parameter for use by the mobile station (col. 2 lines 50-65, col. 1 lines 65-67, col. 2 lines 1-12, and col. 6 lines 8-46, where, Corbett discusses sending an effective as possible neighbor set to the mobile), however Corbett does not specifically disclose optimal system control parameter. Chheda teaches an optimal system control parameter (see col. 4 lines 58-67, col. 6 lines 15-30, and col. 6 lines 15-67, where Chheda discusses optimizing the neighbor set).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Corbett, and have an optimal system control parameter, as taught by Chheda, thus allowing more efficient handoffs by not placing useless information in the control parameter, as discussed by Chheda (col. 4 lines 38-55).

Consider claim 19, Corbett discloses a mobile station capable of communicating with one or more base stations within a communication system providing wireless communication in a coverage area (see abstract lines 1-10, and col. 4 lines 1-35). Corbett discloses the mobile station

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comprising: means for being located within one of a plurality of regions each corresponding to location estimates independent of the one or more base stations (see col. 4 lines 27-55, where Corbett discusses GPS in the mobile, therefore, latitude and longitude independent of the base stations). Corbett discloses the plurality of regions together comprise a reference frame applied to the coverage area (see col. 4 lines 27-55 and col. 5 lines 25-52, where latitude and longitude is a reference frame). Corbett discloses means for receiving a code corresponding to the most effective system control parameter for the region the mobile station is currently located (see col. 6 lines 8-45, col. 1 lines 65-67, and col. 2 lines 1-12, where Corbett discusses the mobile receives a biased neighbor cell list).

Corbett discloses assigning an effective as possible system control parameter for use by the mobile station (col. 2 lines 50-65, col. 1 lines 65-67, col. 2 lines 1-12, and col. 6 lines 8-46, where, Corbett discusses sending an effective as possible neighbor set to the mobile), however Corbett does not specifically disclose optimal system control parameter. Chheda teaches an optimal system control parameter (see col. 4 lines 58-67, col. 6 lines 15-30, and col. 6 lines 15-67, where Chheda discusses optimizing the neighbor set).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Corbett, and have an optimal system control parameter, as taught by Chheda, thus allowing more efficient handoffs by not placing useless information in the control parameter, as discussed by Chheda (col. 4 lines 38-55).

Consider claim 2, 3, 7, Corbett discloses the reference frame is one of a set of geographic coordinates and a grid, wherein the plurality of regions are grid elements (see col. 5 lines 4-52).

Consider claims 4, 8, Corbett discloses the system control parameter is one of a neighbor list of handoff candidates, a handover timer, a handover threshold and a power control threshold (see col. 1 lines 65-67, col. 2 lines 1-12, and col. 6 lines 8-46).

Consider claims 10-12, 44-47, Corbett discloses calculating values for a neighbor set of sending the set to the mobile for more efficient handover (col. 2 lines 50-65, col. 1 lines 65-67, col. 2 lines 1-12, and col. 6 lines 8-46, where, Corbett discusses sending an effective as possible neighbor set to the mobile), however Corbett does not specifically disclose optimal system control parameter. Chheda teaches an optimal system control parameter (see col. 4 lines 58-67, col. 6 lines 15-30, and col. 6 lines 15-67, where Chheda discusses optimizing the neighbor set). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Corbett, and have an optimal system control parameter, as taught by Chheda, thus allowing more efficient handoffs by not placing useless information in the control parameter, as discussed by Chheda (col. 4 lines 38-55).

Consider claim 13 and 48, Corbett discloses a CDMA system (see abstract lines 1-10).

Consider claims 14-18, 20-23, 27-31, and 49-52, Corbett discloses a CDMA soft handoff method wherein biasing values are given to data based on mobile GPS location to create a control parameter (col. 2 lines 50-65, col. 1 lines 65-67, col. 2 lines 1-12, and col. 6 lines 8-46, where, Corbett discusses sending an effective as possible neighbor set to the mobile), however Corbett does not specifically disclose optimal system control parameter via merging or other techniques. Chheda teaches an optimal system control parameter via merging or other techniques (see col. 4 lines 58-67, col. 6 lines 15-30, and col. 6 lines 15-67, where Chheda discusses optimizing the neighbor set). It would have been obvious to one of ordinary skill in the

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art at the time the invention was made to modify the invention of Corbett, and have an optimal system control parameter, as taught by Chheda, thus allowing more efficient handoffs by not placing useless information in the control parameter, as discussed by Chheda (col. 4 lines 38-55).

Allowable Subject Matter

3. Claims 6, 24, 25, and 26, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 32-42 are allowed.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(6,535,738), Bomar discloses optimizing a control parameter.

6. Any inquiry concerning this communication should be directed to Nick Corsaro at telephone number (703) 306-5616.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology center 2600 only)

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth, Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 customer Service Office whose telephone number is (703) 306-0377.

Nick Corsaro

Primary Examiner



**NICK CORSARO
PATENT EXAMINER**